

Work Order ID 154006***154006***

Page 1

Wednesday, November 30, 2016 4:02:19 PM

Item ID: D2432

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bearpaw 19" X 24"

Start Date: 11/16/2016 Start Qty: 8.00

8

Cust Item ID:

Required Date: 11/30/2016 Req'd Qty: 8.00

8

Customer:

Reference:

DAS
21
9-89Approvals: Process Plan: Date: **DEC 01 2016**

Tooling:

Date: Run Start ***NR1***QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D2432

H

120

0.00

120

FLOW WATER JET

Waterjet

Memo

0.20

FLOW CNC Waterjet

Cut Blank as per D2432 File

816/12/05

130

0.09

130

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.60

HAAS CNC vertical machine #1

1-Inspect material for defects or damage prior to machining
2-Machine as per Folio and Dwg D2432 Identify as D2432F
3-Deburr8ØDAS
49
9-8917/01/05

140

0.00

140

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.01

Quality Control

8ØDAS
49
9-8917/01/06

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Work Order ID 154006

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154006

Page 2

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Accept

N900040100

Setup Start

NS1

Revision ID:

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NS2

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Start Date: 11/16/2016 Start Qty: 8.00

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Cust Item ID:

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Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

QC8- Inspect parts - second check

0.00

150

QC

Memo

0.03

Quality Control

DAS

44

9-89

17-01-09

PTO →

160

Identify as per dwg & Stock Location: 51430A

0.00

160

Packaging

Memo

0.01

Packaging

DAS

6

9-89

170

QC21- Final Inspection - Work Order Release

0.00

170

QC

Memo

0.13

Quality Control

DAS

21

9-89

JAN 16 2017

ME

17-1-12

DQA:

Date: 2017-02-22

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed:

Date: JAN 20 2017

Work Order update only ☐

Work Order: 154006 Part No. DA 2432 NCR No. 7		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☒ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Water Jet ☐ Engineering ☐ Machining ☒ Small Fab ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Composite ☐ Supplier ☐					
Date: 17.01.11		Step #: 130		QTY Effective: ①			MRB (QSI042) Approval DAS 9 9-89 17.01.11		
Description Work Order Deviation				Disposition				Completed By: DAS 49 17.01.11 9-89 Lead hand / Supervisor Approval Verification DAS 9 17.01.11 9-89 QC / QA Coordinator Approval DAS 9 9-89 17.01.11	
The .250" chamfer. is .325" .325" 240 AA 88-9 P.C. operator did not enter correct numbers. not second checking work BAL				acceptable					
Root Cause Environment ☐ No Re-verification ☐ Design ☒ Operator ☒ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Bending ☐ Set-up ☐ Folio/Program ☒ Outside Dimensions ☒ Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance ☐ Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing ☐ Cuffs ☐ Contamination ☐ Out of Sequence ☐ Part Moved ☐ Crushing ☐ Countersink ☐ Off-set ☐ Drawing ☐ Heat Treat ☐ Cut Too Short ☐ Misabeled ☐ Finish ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Fit/Function ☐ Misread ☐ Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence ☐						OTHER :	

Picklist Print

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Page 1

Work Order ID: 154006

154006

Parent Item: D2432

D2432

Parent Item Name: Bearpaw 19" X 24"

Start Date: 11/16/2016

Required Date: 11/30/2016

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 12.10.17 AS PER DWG REV.H DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No			120	sf	280.0000	3.7	29.6			

MUHMWB10

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

on 11/12/05

Location

Loc Qty

Loc Code

MAT018

280

m135013

14

m135913

266

135497

4

27

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

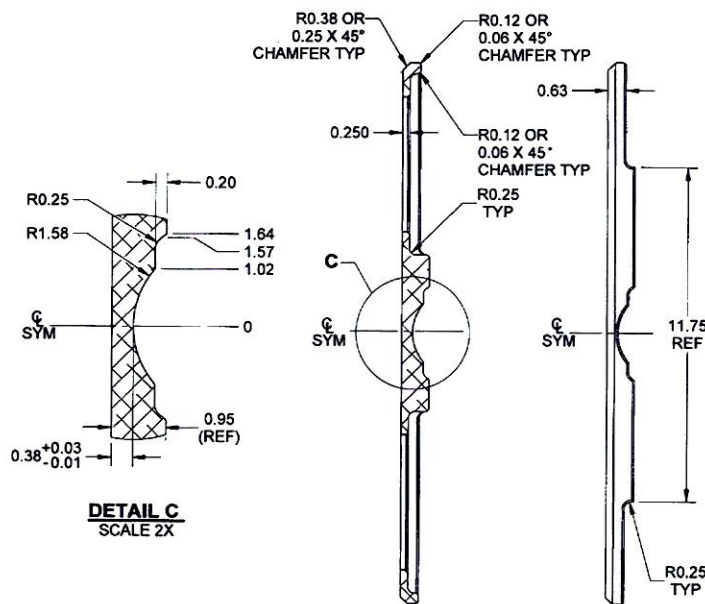
DART AEROSPACE LTD		Work Order: 154006
Description: Bearpaw		Part Number: D2432
Inspection Dwg: D2432	Rev: H	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet	Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A	0.063 x 45°	+0.030/-0.010	0.070 x 45°	/		vern	mm L-05
B	0.200	+/-0.030	0.203	/		"	
C	0.25 x 45°	+/-0.030	0.25 x 45°	/		"	
D	R0.250	+/-0.030	0.250	/		RG	
E	0.250	+/-0.010	0.244	/		micro	mm L-01
F	0.625	+/-0.030	0.615	/		vern	mm L-05
G	0.375	+0.030/-0.010	0.379	/		"	
H	0.950	+/-0.030	0.948	/		"	
I	19.000	+/-0.030	19.000	/		tape	
J	Ø0.260	+0.005/-0.000	0.260	/		vern	mm L-05
K	Ø0.93	+/-0.030	0.928	/		"	
L	0.30	+0.030/-0.000	0.315	/		"	
M	23.750	+/-0.030	23.750	/		tape	
N	2.000	+/-0.030	2.012	/		vern	mm L-05
O	0.38	+/-0.030	0.375	/		"	
P							
Q							
R							
S							
T							
U							
V							

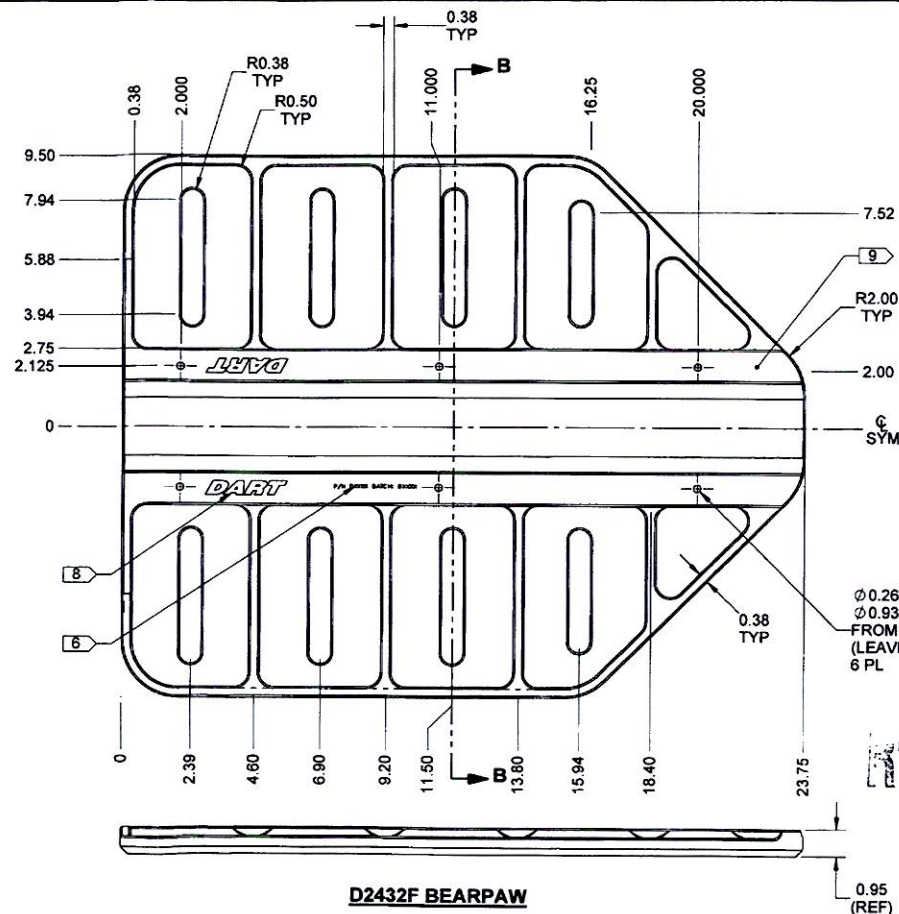
Measured by: DAS 49	Audited by: DAS 44	Preliminary Approval:
Date: 17/01/06	Date: 17-01-09	Date:

Rev	Date	Change	Revised by	Approved
A	04.01.09	New Issue P/O D206-559-015	KJ/RF	
B	12.07.31	Dwg Rev updated	KJ	
C	12.10.26	Dwg Rev updated	KJ	
D	13.07.18	Dimension 7.375 removed	KJ	
E	15.02.09	Dimensions revised	KJ	



DETAIL C
SCALE 2X

SECTION B-B



D2432F BEARPAW

NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.000 THICK MACHINED TO 0.950 (REF DART SPEC. MUHMWB10)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART NUMBER "D2432" AND BATCH NUMBER "BXXXXX" IN ACCORDANCE WITH QSI 044 METHOD 6.3
- 7) WEIGHT: 5.87 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.012
- 9) APPLY 0.06 x 45° CHAMFER TO ALL EDGES ON SIDE SHOWN UNLESS OTHERWISE INDICATED
- 10) PROFILE PER DRAWING FILE "D2434F-REVH.STP"

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 154006

DESIGN	LE	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ALS	DRAWING NO.	REV. H
MFG. APPR.	21	D2432	SHEET 2 OF 3
APPROVED	140	TITLE	SCALE
DE APPR.	140	BEARPAW	NTS
DATE	12.09.24	COPYRIGHT © 1996 BY DART AEROSPACE LTD	
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2012-10-16